Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application using (Original) (Currently Amended) (New) (Canceled) (Previously Presented) nomenclature, as recited in the below listing of claims.

1. (Original) A system for channelizing an IF wideband input signal into separated channelized digital output signals, the system comprising,

a complex mixer for quadrature demodulation of the IF wideband input signal into a complex signal,

a polyphase clock generator for generating polyphase clock signals each having the same clocking signal that is staggered in phase over a clock cycle,

a parallel converter comprising a bank of samplers for respective sampling the complex signal into staggered sampled complex signals and comprising a bank of converters for converting the staggered sampled complex signals into respective sampled digital complex signals, each of the samplers of the bank of samplers sampling the complex signals at a rate of the clock cycle at a respective staggered phase, and

a parallel filter bank comprising a polyphase filter bank of filters for respective filtering the sampled digital complex signals into respective filtered complex signals and comprising a processor for transforming the filtered complex signals into the channelized digital output signals.

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2. (Currently Amended) A system for channelizing an IF wideband input signal into separated channelized digital output signals, the system comprising,

a complex mixer for quadrature demodulation of the IF wideband input signal into a complex signal,

a polyphase clock generator for generating polyphase clock signals each having the same clocking signal that is staggered in phase over a clock cycle,

a parallel converter comprising a bank of samplers for respective sampling the complex signal into staggered sampled complex signals and comprising a bank of converters for converting the staggered sampled complex signals into respective sampled digital complex signals, each of the samplers of the bank of samplers sampling the complex signals at a rate of the clock cycle at a respective staggered phase, and

a parallel filter bank comprising a polyphase filter bank of filters for respective filtering the sampled digital complex signals into respective filtered complex signals and comprising a processor for transforming the filtered complex signals into the channelized digital output signals, ~~The system of claim 1~~ wherein,

the processor is a Fast Fourier Transform processor for computing N point Fast Fourier transforms of the N filter complex signals once every clock cycle of $(f_s/N)^{-1}$ seconds.

3. (Currently Amended) The system of claim ~~1~~ 2 wherein,

the polyphase filter bank comprises a plurality of digital filters each of which is a finite impulse response filter.

4. (Currently Amended) The system of claim ~~1~~ 2 wherein,

the polyphase filter bank comprises a plurality of digital filters each of which is an infinite impulse response filter.

5. (Currently Amended) The system of claim ~~1~~ 2 wherein,

the input signal comprises a plurality of channel signals that are frequency division multiple access signals having a channel bandwidth, and

the polyphase filter bank comprises a plurality of digital filters each of which having a bandwidth equal to 1/2 of a bandwidth of a respective channel signal in the input signal.

6. (Currently Amended) The system of claim ~~1~~ 2 wherein,

the input signal is an IF wideband signal communicating channel signals communicated within a channel bandwidth,

the complex signal comprises I and Q quadrature baseband signals,

the staggered sampled complex signals are staggered sampled I and Q quadrature baseband signals,

the sampled digital complex signals are digitized staggered sampled I and Q quadrature baseband signals,

the filtered complex signals are baseband channel signals within 1/2 of the channel bandwidth, and

the channelized digital output signals are separated baseband channel signals.

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7. (Original) A system for channelizing an IF wideband signal into channelized digital output signals, the system comprising,

a complex mixer for quadrature demodulation of the IF wideband signal into a complex signal communicating channel signals communicated within a channel bandwidth, the complex signal comprises I and Q quadrature baseband signals,

a polyphase clock generator for generating polyphase clock signals each of which having the same clocking signal that is staggered in phase over a clock cycle,

a bank of samplers for respective sampling the I and Q baseband quadrature signals into staggered sampled I and Q quadrature signals, each of the samplers of the bank of sampler sampling the I and Q quadrature signals at a rate of the clock cycle at a respective staggered phase,

a bank of converters for converting the staggered sampled I and Q quadrature signals into respective sampled digital I and Q quadrature signals,

a polyphase filter bank of filters for respective filtering the sampled digital I and Q quadrature signals into respective filtered I and Q quadrature signals, and

a processor for transforming the filtered I and Q quadrature signals into the channelized digital output signals.

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8. (Original) The system of claim 7 wherein,

the processor is a Fast Fourier Transform processor for computing N point Fast Fourier transforms of the N filter complex signals once every clock cycle of $(f_s/N)^{-1}$ seconds, and

the polyphase filter bank comprises a plurality of digital filters each of which is a finite impulse response filter.

9. (Original) The system of claim 7 wherein,

the IF wideband signal comprises a plurality of channel signals that are in frequency division multiple access signals having a channel bandwidth, and

the polyphase filter bank comprises a plurality of digital filters each of which having a bandwidth equal to 1/2 of a bandwidth of a respective channel signal in the input signal.

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